

What is claimed is:

1 1. A light emitting apparatus, comprising:
2 a plurality of surface mount device type light emitting
3 diode elements;
4 a circuit board on which the plurality of surface mount
5 device type light emitting diode elements are mounted; and
6 a plurality of convex lenses each of which covers the light
7 extraction side of corresponding one of the plurality of surface
8 mount device type light emitting diode elements;
9 wherein the lens optical axis of at least one of the
10 plurality of convex lenses does not coincide with an axis that
11 passes through the center of corresponding one of the plurality
12 of surface mount device type light emitting diode elements and
13 is perpendicular to the circuit board.

1 2. A light emitting apparatus, comprising:
2 a plurality of surface mount device type light emitting
3 diode elements;
4 a circuit board on which the plurality of surface mount
5 device type light emitting diode elements are mounted; and
6 a plurality of convex lenses each of which covers the light
7 extraction side of corresponding one of the plurality of surface
8 mount device type light emitting diode elements;
9 wherein: lines to connect between centers of the
10 plurality of surface mount device type light emitting diode
11 elements define a virtual convex polygon; the lens apex of at
12 least one of the plurality of convex lenses is located further
13 than the position just over the corresponding light emitting

14 diode element when viewing from the gravity point of the virtual
15 convex polygon; and the lens optical axis is located on a plane
16 that is defined by the optical axis of corresponding light
17 emitting diode element and a straight line perpendicular to the
18 circuit board and passing through the gravity point of the
19 virtual convex polygon, and intersects with the straight line.

1 3. A light emitting apparatus, comprising:
2 a plurality of surface mount device type light emitting
3 diode elements;
4 a circuit board on which the plurality of surface mount
5 device type light emitting diode elements are mounted; and
6 a plurality of convex lenses each of which covers the light
7 extraction side of corresponding one of the plurality of surface
8 mount device type light emitting diode elements;
9 wherein: lines to connect between centers of the
10 plurality of surface mount device type light emitting diode
11 elements define a virtual convex polygon; the lens apex of the
12 plurality of convex lenses is located further than the position
13 just over the corresponding light emitting diode element when
14 viewing from the gravity point of the virtual convex polygon;
15 and the lens optical axis is not parallel to and does not
16 intersect with a straight line perpendicular to the circuit
17 board and passing through the gravity point of the virtual
18 convex polygon.

1 4. The light emitting apparatus according to claim 2,
2 wherein:
3 the optical axes of the plurality of convex lenses

4 intersect with each other at one point on the straight line
5 perpendicular to the circuit board and passing through the
6 gravity point of the virtual convex polygon.

1 5. The light emitting apparatus according to claim 2,
2 wherein:

3 the virtual convex polygon is a regular polygon.

1 6. The light emitting apparatus according to claim 2,
2 wherein:

3 the virtual convex polygon is a regular triangle.

1 7. The light emitting apparatus according to claim 1,
2 wherein:

3 the plurality of convex lenses are integrated in
4 construction.

1 8. The light emitting apparatus according to claim 1,
2 wherein:

3 each of the plurality of convex lenses has a convex surface
4 on the side of corresponding surface mount type light emitting
5 diode element.

1 9. The light emitting apparatus according to claim 7,
2 wherein:

3 the plurality of convex lenses includes a common boundary
4 region that has a flat surface on the light extraction side.

1 10. The light emitting apparatus according to claim 1,

2 further comprising:

3 a reflector that is disposed to surround the plurality
4 of convex lenses.